



2012-2013 School Nominee Presentation Form

PART I - ELIGIBILITY CERTIFICATION

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.



U.S. Department of Education Green Ribbon Schools 2013

For Public Schools only: ☐ Charter ☐ Title I ☐ Magnet ☐ ChoiceName of Principal Mr. Frank Santoro
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)Official School Name Quincy High School
(As it should appear in the official records)

School

Mailing Address 100 Coddington Street

City Quincy State Mass Zip 02169

County Norfolk State School Code Number* 0243-0505

Telephone (617) 984-8754 Fax ()

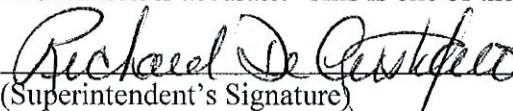
Web site/URL <http://quincypublicschools.com/qhs/>E-mail franksantoro@quincypublicschools.com

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.


(Principal's Signature) Date February 5, 2013Name of Superintendent* Dr. Richard DeCristofaro
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name* Quincy Public Schools Tel. (617) 984-8700

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate. This is one of the highest performing green schools in my jurisdiction.


(Superintendent's Signature) Date 2/5/13

*Private Schools: If the information requested is not applicable, write N/A in the space.



PART II – SUMMARY OF ACHIEVEMENTS

Instructions to School Principal

Provide a concise and coherent "snapshot" that describes how your school is representative of your jurisdiction's highest achieving green school efforts in approximately 800 words. Summarize your strengths and accomplishments. Focus on what makes your school worthy of the title U.S. Department of Education Green Ribbon School.

Please see Green Ribbon Application- Pillar I, Summary Narrative

PART III – DOCUMENTATION OF STATE EVALUATION OF NOMINEE

Instructions to Nominating Authority

The Nominating Authority must document schools' high achievement in each of the three ED-GRS Pillars and nine Elements. For each school nominated, please attach documentation in each Pillar and Element. This may be the Authority's application based on the Framework and sample application or a committee's written evaluation of a school in each Pillar and Element.

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating

Agency

Massachusetts Department of Elementary
and Secondary Education

Name of Nominating

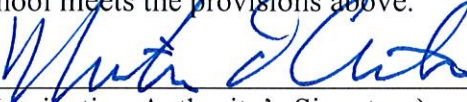
Authority

Mitchell D. Chester, Ed.D., Commissioner

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)



I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.


(Nominating Authority's Signature)

Date 2/13/13

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509
Expiration Date: February 28, 2015

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.



ED-GRS Sample Nominating Authority Application

Thank you for your interest in completing the Massachusetts application for nomination to U.S. Department of Education Green Ribbon Schools (ED-GRS). In order to complete this application, you will need to collect data about your school's facility, health and safety policies; food service; and environmental and sustainability curriculum.

ED-GRS recognizes schools taking a comprehensive approach to greening their school. A comprehensive approach incorporates environmental learning with improving environmental and health impacts. Becoming a U.S. Department of Education Green Ribbon School is a two-step process. The first step is to complete and submit this form to be selected as a nominee by Massachusetts Department of Elementary and Secondary Education (ESE). The second step of the process requires signatures for the nominee package that will be sent to the U.S. Department of Education (ED).

ED selects honorees from those presented by states and other eligible nominating authorities nationwide. Selection will be based on documentation of the applicant's high achievement in the three ED-GRS Pillars:

Pillar I: Reduce environmental impact and costs.

Pillar II: Improve the health and wellness of students and staff.

Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways.

Schools demonstrating exemplary achievement in all three Pillars will receive highest rankings. It is important to document concrete achievement.

It will help you to assemble a team to complete the application. This team might include: a facilities manager, physical education director, food services director, curriculum director, finance department representatives, teachers and students. You should consult the [ESE Green Ribbon Schools](#) page for Massachusetts specific resources and the ED-GRS [resources page](#) for standards, programs and grants related to each Pillar, Element and question. This is an excellent clearinghouse of resources for all schools, not just those who apply. ESE encourages schools to reach out to the contacts provided if you are not able to provide documentation in certain areas. They are willing to assist you in compiling and accessing this information.

The questions in this application will help you demonstrate your high achievement in these Pillars as well as provide space for you to include pertinent documentation. You will receive points when you provide documentation for your answers. Please attach responses that require more space than provided and include the corresponding application question number. **Applications are due to ESE by December 14, 2012.**

Applications may be sent electronically to Lauren Greene at lgreene@doe.mass.edu (781-338-3107)

Note that if selected for nomination to ED-GRS, the school principal and district superintendent must be prepared to certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true; however, in no case is a private school required to make any certification with regard to the public school district in which it is located.



1. The school has some configuration that includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
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5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

School Contact Information

School Name: Quincy High School

Street Address: 100 Coddington Street

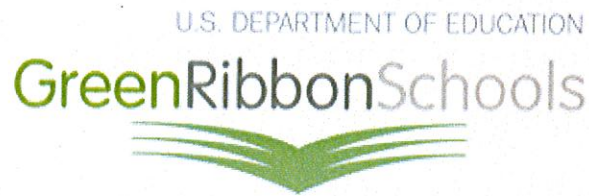
City: Quincy State: MA Zip: 02169

Website: <http://quincypublicschools.com/qhs/> Facebook page: <http://www.facebook.com/pages/Quincy-High-School/409964685633?fref=ts>

Principal Name: Frank Santoro

Principal Email Address: franksantoro@quincypublicschools.com

Phone Number: 617-984-8754



Lead Applicant Name (if different): Susan C. Karim, Research Assistant Planner, City of Quincy Planning Department

Lead Applicant Email skarim@quincyma.gov

Phone Number: 617-376-1368

Level <input type="checkbox"/> Elementary (PK - 5) <input type="checkbox"/> Middle (6 - 8) <input checked="" type="checkbox"/> High (9 - 12)	School Type <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private/Independent <input type="checkbox"/> Charter	How would you describe your school? <input checked="" type="checkbox"/> Urban <input type="checkbox"/> Suburban <input type="checkbox"/> Rural	District Name Quincy Public Schools <input checked="" type="checkbox"/> Largest 50 Districts Total Enrolled: 1582
Does your school serve 40% or more students from disadvantaged households? <input checked="" type="checkbox"/> Yes () No	% receiving FRPL 47% % limited English proficient 7.5 % Other measures _____		Graduation rate: 87% Attendance rate: 6.2% Absentee

Application Outline:

<u>ED-GRS Pillars and Elements</u>	<u>Points</u>
Cross-Cutting Question: Participation in green school programs	5 points
Pillar I: Reduce environmental impact and costs: 30%	
Element 1A: Reduced or eliminated greenhouse gas (GHG) emissions Energy Buildings	15 points
Element 1B: Improved water quality, efficiency, and conservation Water Grounds	5 points
Element 1C: Reduced waste production Waste Hazardous waste	5 points
Element 1D: Use of alternative transportation	5 points



Pillar II: Improve the health and wellness of students and staff: 30%	
Element 2A: Integrated school environmental health program Integrated Pest Management Contaminant controls and Ventilation Asthma control Indoor air quality Moisture control Chemical management	15 points
Element 2B: Nutrition and fitness Fitness and outdoor time Food and Nutrition	15 points
Pillar III: Provide effective environmental and sustainability education, incorporating STEM, civic skills and green career pathways: 35%	
Element 3A: Interdisciplinary learning about the key relationships between dynamic environmental, energy and human systems	20 points
Element 3B: Use of the environment and sustainability to develop STEM content, knowledge, and thinking skills	5 points
Element 3C: Development and application of civic knowledge and skills	10 points
Total	100 points

Summary Narrative: Provide a 500 word maximum narrative describing your school's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

The newly constructed Quincy High School is an award winning building designed to benefit from the latest sustainably focused construction standards aimed at minimizing environmental impacts while reducing energy costs. The school was built with a state of the art HVAC system that maintains an exemplary level of indoor environmental air quality, providing a healthy environment for both students and staff. The highly trained Maintenance staff is integral to continuous quality control through diligent monitoring, and only eco-friendly products are used to maintain environmental health both for the school and for the broader environment.

Three academic wings dedicated to STEM, Arts, and the Humanities have all been designed to incorporate subject areas that are associated with each other. Teaching staff provides a safe and supportive learning environment which emphasizes high academic expectations and civic and social responsibility which fosters respect for individual and cultural diversity, while school curriculum and programs provide a comprehensive education which opens multiple career paths. Teachers work together as a team drafting lessons that show connections between their disciplines and have students solve real world problems.



The Quincy High School Professional Learning community is a thriving and essential piece of the QHS organizational structure providing an unprecedented level of teacher leadership, professional development, collaboration, and tangible contribution to the entire school community. Teachers are assigned to specific interdisciplinary teams under the direction of team facilitators on a weekly basis during the school day. Our unique rotating block schedule has allowed for this designated time. These newly designed professional learning community teams have generated the most collaboration, ownership, and pride amongst all of our teachers. This professional interdisciplinary collaboration has enhanced student learning as the teachers value the time and opportunity to provide feedback so that professional development meets teachers' expectations and benefits the students' learning. These teams of teachers have been an integral part of providing the best instruction for our students and solving school-wide problems. What follows is a list of some of the projects these teaching teams have worked on: Celebrating Excellence; Improving Student Participation; A Parents Quick Guide to QHS; Creating a Parent Resource Center; Improving the Parent Conference Experience; Investigating Classroom Websites; Increase Staff Communication; Using Video as an Instructional Tool; A Ninth Grade Map to Graduation; Sharing Best Practices; A Special Ed Resource Guide for Teachers; Word of the Week; Building Peer Leaders; The Cultural Fair; Integrating Technology; A Manual for Interwrite Boards; Integrating Technology; Interdisciplinary Connections; Peer Observations; Sharing Staff Resources; Increasing ELL Participation; School Spirit; Increasing Participation at Parent Conferences; and Creating a Teacher Resource Guide.

The Great Ideas Program, a State Street Foundation Grant for Interdisciplinary Planning, has enhanced this mission immensely, providing funding that has allowed the school to institute a broad scope of cross-discipline lessons into the curriculum intended to stimulate new ideas and new ways of thinking about our world community and our responsibility to environmental stewardship. The following cross-disciplined lessons and topics are a direct result of this fortuitous funding opportunity:

- Chemistry/Social Studies explores renewable energy to understand sustainability, the effect of energy use on a carbon footprint, the use of solar and wind energy, the process of removing oil from water, the quality of air and water needed to support a healthy environment, and the role of the government in protecting our environment.
- Earth-Marine Science/Biology/Carpentry/Plumbing/Engineering assesses potential sources of pollution entering Quincy Bay and the impact of human activities on marine ecosystems, conducts scientific assessments on their findings, and creates tables and graphs that effectively and accurately represent their data.
- Social Studies/Earth Science students learn the economic and civic responsibilities of establishing Single Stream Recycling, assess current usage of waste, identify gaps in waste management, and perform pre and post assessment evaluations.



- Horticulture/Culinary/Carpentry/Broadcasting/World Language/Social Studies learn how freshly grown organic herbs can improve the global food industry through urban gardening, constructing raised beds, healthful cooking, alternative composting and innovative growing techniques.
- Environmental Science/Carpentry/Plumbing learns how humans and salt marsh ecosystems interact with one another.
- Automotive/Mathematics teaches the relationship between American and Metric Conversions for use in automotive technology.
- Asian World History/Earth Science explores the similarities and differences using the global and local comparison between the Ganges and Neponset Rivers and the human impacts on them in order to understand issues related to waterways here and abroad.

The school incorporates a modernized approach to learning which demonstrates that subject matter is connected to the real world. Graduates of Quincy High School will be prepared to think, work and share as skilled members of our 21st century global community.

1. Is your school participating in a local, state or national school program which asks you to benchmark progress in some fashion in any or all of the Pillars?

(X) Yes () No Program(s) and level(s) achieved:

Chapter 74 Revolving Federal Funds grants, ongoing; State Street Heritage Program 2009; State Street Great Ideas Grant, 2011-2012; Quincy High School has spent the last few years preparing for the New England Association of Schools and Colleges (NEASC) decennial visit for continued accreditation; Massachusetts Green Communities designation 2010 requires 20% energy use reduction within 5 years. This building is the largest in the City and comprises 14% of overall municipal energy use.

2. Has your school, staff or student body received any awards for facilities, health or environment?

(X) Yes () No: Award(s) and year(s)

American School & University: Educational Interiors Showcase 2011; Outstanding Designs: Vocational/Industrial Arts Area; The Council of Educational Facilities Planners International Northeast Region Design Concept Award 2010.



Pillar I: Reduced Environmental Impact and Costs

Energy

1. Can your school demonstrate a reduction in Greenhouse Gas emissions?

(X) Yes () No:

PV power generation in addition to energy use demonstrate that Quincy High School achieved a reduction of 48.5 CO₂ Equivalent Emissions (metric tons) from fiscal year (FY) 2011 to FY 2012. See attached EPA GHG emissions calculator worksheet for more detail on this calculation.

The City of Quincy is using a portion of its Green Community grant of \$370,325 to retrocommission Quincy High School. One of 2 such efforts, the retrocommissioning of the facility is estimated to save about 2799 MMBtu/year, contributing to the reduction of the City's total yearly consumption by approximately 2.6%, with a projected annual savings of \$77,762.

As part of its Energy Use Reduction Plan (EURP), the City of Quincy proposed implementing a behavior based energy efficiency campaign across the entire school district and across all City departments beginning in the fall of 2012, with the goal of achieving additional reductions in GHG emissions.

Percentage reduction: Electricity: 7%

Gas: Given available data, straight line projection 2011 and 2012 usage unchanged. See attached EPA GHG emissions calculator worksheet for more detail on this calculation.

Initial GHG emissions rate (MT eCO₂/person): 1949.6 / students + staff

Final GHG emissions rate (MT eCO₂/person): 1901.1/students + staff

Offsets: Photovoltaic Power Generation 77,480 kWh

How did you calculate the reduction?

We used benchmark data for FY 2011 and FY 2012 extracted from the Quincy Energy Use Reduction Plan, which was prepared in part by Mass Energy Consumers Alliance. We used Mass Energy Insight software to track and calculate raw energy use data. To qualify as a Massachusetts Green Community, City staff and City consultant Mass Energy Consumers Alliance created an Energy Use Reporting Template that compared FY 2011 energy use data and FY 2012 energy use data.

2. Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification?

(X) Yes () No Year(s) and score(s) received: 2008 (75)



3. Has your school reduced its total non-transportation energy use from an initial baseline? (X) Yes () No

Current energy usage (kBtu/student/year): _____

Current energy usage (kBtu/sq. ft. /year): _____

Percentage reduction: 1.9%; Savings % of Total Municipal Usage: 4002 MMBtu;

Savings % of Savings Goal: $4002/42,603 = 9.3\%$ over (m/yy - mm/yy): 1/13-12/13

How did you document this reduction?

MassEnergy Consumers Alliance Status Report on the City of Quincy's Energy Reduction Plan
Prepared by Larry Chretien, Maura O'Gara, and Stephan Wollenburg on October 31, 2012.

4. What percentage of your school's energy is obtained from:

On-site renewable energy generation: (Data to be collected as part of upcoming student-led high school energy audit in accordance with Eco-Schools USA guidelines).

Type: Multiple Rooftop Photovoltaic Arrays.

Purchased renewable energy: 77,480 kWh, 264 MMBtu Type: Electric

Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program:

The school purchased a wind turbine for use as a renewable energy source, but there have been some stumbling blocks on the road to installation. We remain hopeful, however. National Grid, the City's electric utility, conducted a lighting monitoring program from November 2011-November 2012 utilizing DNV KEMA Energy & Sustainability to evaluate the performance of lighting efficiency measures. While loggers were just removed for analysis, school facilities personnel are working with the DNV KEMA and National Grid to evaluate results and implement recommendations.

5. In what year was your school originally constructed? 2009-2010

What is the total building area of your school? 329,448 square feet.

6. Has your school constructed or renovated building(s) in the past ten years? (X) Yes () No

For new building(s): Percentage building area that meets green building standards: 100%

Certification and level: MA- CHPS-(2009)

Total constructed area: 329,448 square feet

For renovated building(s): Percentage of the building area that meets green building standards:

_____ Certification and level: _____ Total renovated area:



Water and Grounds

7. Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

Given the CHPS certification and the requirements regarding exceeding base code efficiency by at least 20% for potable water and associated sewer discharge, the building is certainly performing at a higher level of efficiency than the circa 1940 building that was replaced. It is our intention to work with the school's energy club, Quincy Environment/Energy Support Team (QUEST), to gather water use data and begin to track use over time. The only area of the school grounds with irrigation is the new track facility at the adjacent Faxon Field. We have not used the irrigation system yet and most likely will not until late June / early July 2013. Because the field has only been completed within the past season, there is insufficient data from which to estimate consumption/reduction rates at this time.

Average Baseline water use (gallons per occupant): _____

Current water use (gallons per occupant): _____

Percentage reduction in domestic water use: _____

Percentage reduction in irrigation water use: _____

Time period measured (mm/yyyy - mm/yyyy): _____

How did you document this reduction (ie. ENERGY STAR Portfolio Manager, utility bills, school district reports)? _____

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? 100%

Types of plants used and location:

All the plantings are indigenous to the local area. Plantings are simple, consisting of mostly trees and lawn to avoid high maintenance costs. Locust trees are used for shade on the south side of the building and in the student courtyard. Bands of low-maintenance shrubs (juniper, cotoneaster) used in parking lot islands. Lawn and shade trees (linden) are used throughout the student parking and walkway areas. Small planting areas are located near doorways for some bright annuals and seasonal flowers.

9. Describe alternate water sources used for irrigation. (100 words max)

There is no alternate water source used for irrigation at this time, as the only irrigation that will be used on-site at the start of the 2013 school year is the recently built Faxon Field. (See Question 7).

10. Describe any efforts to reduce storm water runoff and/or reduce impermeable surfaces. (100 words max)

Paved hardscapes in pedestrian areas are of pervious precast materials. Surface drainage is used on lawn and planted areas to promote natural absorption and runoff.



11. Our school's drinking water comes from: () Municipal water source () Well on school property (X) Other:

Mass Water Resources Authority (MWRA).

12. Describe how the water source is protected from potential contaminants. (100 words max)

Tests are conducted on raw and treated water samples using 6 indicators: microbial, corrosiveness, disinfection byproducts, turbidity and algae, disinfectant residual and mineral analysis, according to The Federal Safe Drinking Water Act standards for coliform, turbidity, watershed protection, disinfection and disinfection by-products, chemical contaminants, and waterborne disease outbreaks. MWRA monitoring frequencies vary by parameter. Communities must meet SDWA standards. The Total Coliform Rule (TCR) alerts communities to possible microbial contamination and adequacy of residual disinfection within the local distribution system. MWRA tests over 2000 samples per month. Greater than 5% of community samples positive for total coliform violate standards.

Source: WATER QUALITY UPDATE - An Analysis of August 2012 Sampling Data www.mwra.com

13. Describe the program you have in place to control lead in drinking water. (100 words max)

See above, lead controlled through water quality sampling protocol.

14. What percentage of the school grounds are devoted to ecologically beneficial uses?

About 1/3 of the property is covered by the structure and another 1/3 by the parking areas. The planted landscape is passive and absorbs or reduces runoff during storms. The pedestrian areas are paved with permeable pavers and are compatible with the water management plan. The overall benefit is the reduction of flooding into the adjacent wetland areas and the filtering of water.

Waste

15. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or composting? Complete all the calculations below to receive points.

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected):

=10 cubic yds. x 20 collections per month x 75 percent full

=10 x 20 x 0.75

=150 cubic yards of waste generated per month



B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected):

=10 cubic yards x 3 collections per month x 75 percent full

=10 x 3 x 0.75

=22.5 cubic yards of waste recycled

C - Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected):

Not as yet implemented, but currently working on implementing a plan with Commissioner of Public Works.

Recycling Rate = $((B + C) \div (A + B + C) \times 100)$:

=(22.5+0) / (150+22.5+0) x 100

=22.5 / 172.5 x 100

=17.25%

Monthly waste generated per person = (A/number of students and staff): Nearly 10% on average

=150 cubic yards /1682 people

=0.089 cubic yards of waste generated per person per month

Adjusting for the absentee rate of students:

=150 cubic yards / (average of 1584 people in the building on any given school day, assuming 100% attendance for the estimated 100 staff and faculty members)

=150 / 1584

=0.094 cubic yards of waste generated per person per month

16. What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free?

80% of the paper used is FSC certified.

17. List the types and amounts of hazardous waste generated at your school:

Flammable liquids	Corrosive liquids	Toxics	Mercury	Other:
The school generates only small amounts of acetone, ethanol, and biodiesel. They are evaporated through fume hoods at Quincy High School.	The school produces small amounts of concentrated acids and bases including sodium hydroxide, potassium hydroxide, hydrochloric acid, sulfuric acid, and acetic acid. These liquids are neutralized in a classroom acid/base bath as appropriate. These already safe liquids are then flushed through the classroom sink which leads to an internal neutralization system at Quincy High School before exiting.	N/A	N/A	Biological hazards including bacteria cultures are autoclaved prior to disposal in classroom receptacles. Any additional hazardous chemicals are collected and disposed of through a school partnership with the NFPA.

How is this measured?

On-site school maintenance staff works in partnership with the Energy, Waste and Recycling Manager in City of Quincy's Department of Public Works and the NFPA.

How is hazardous waste disposal tracked?

Tracking records are maintained by the City's Energy, Waste, and Recycling Manager.

Describe other measures taken to reduce solid waste and eliminate hazardous waste. (100 word max)

Single stream recycling program implemented citywide, QUEST club students monitor and encourage classroom recycling use and assist in implementing disposal.

18. Which green cleaning custodial standard is used? 100 %

What percentage of all products is certified? 100 %



What specific third party certified green cleaning product standard does your school use?

Floor care program is through Buckeye Certified Green Cleaning System which states: "the Green Seal™ Standard for Cleaning Products for Industrial and Institutional Use, GS-37, based on its reduced human and environmental toxicity and reduced volatile organic compound content." Green Seal.org states: "Our sustainability standards for products, services, and companies are based on life cycle research and are developed in an open, transparent, and stakeholder-involved process. Green Seal standards provide criteria and guidelines for manufacturers, service providers, and companies to work toward sustainability and Green Seal certification. Green Seal has 30 issued standards that cover over 337 product and service categories."

Alternative Transportation

19. What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school? (Note if your school does not use school buses)

90% of our students walk, bike, bus or carpool. We have no school busses.

How is this data calculated? (100 word max)

Because we are located in the hub of Quincy Center, most students either live within walking distance or use MBTA trains and busses, which are a short walk from school grounds. Simple observation of the Quincy Center T teeming with students documents the data. We offer a discounted MBTA Pass program that is cost effective and most parents take advantage of the commuter cost and time savings it affords them. Students who are driven to school usually carpool with other students. We also have plenty of bike racks, which are well utilized.

20. Has your school implemented?

☒ [X] designated carpool parking stalls.

☒ [X] A well-publicized no idling policy that applies to all vehicles (including school buses).

☒ [X] Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.

☐ [] Safe Pedestrian Routes to school or Safe Routes to School.

As yet the school has not participated in this program, but with the redevelopment of the downtown area placing great emphasis on pedestrian safety issues, it seems highly probable that this program will be incorporated into the school over the next several years.

Describe activities in your safe routes program: (100 word max)



21. Describe how your school transportation use is efficient and has reduced its environmental impact. (100 word max)

We efficiently reduce environmental impacts by having bike racks, students use the MBTA for both busses and subway trains, and we have a reduced MBTA Bus Pass program that encourages public transportation to reduce the environmental impact resulting from the unnecessary use of private transportation and energy inefficient school busses.

22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships. (100 word max)

Partnership with MassDOT: Reduced Fare Student Charlie Cards Monthly Pass Program reduces transportation cost by half and encourages public transportation resulting in GHG emissions reductions.

Pillar 2: Improve the health and wellness of students and staff

Environmental Health

1. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use:

The Park Department oversees the grounds of Quincy High School and does not apply any pesticides, herbicides, etc. to any of the school grounds. School grounds are restricted through Integrated Pest Management (IPM) policies indoors and outdoors.

2. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? Provide specific examples of actions taken for each checked practice.

☒ [X] Our school prohibits smoking on campus and in public school buses.

Smoking is strictly prohibited on all school property.

☒ [X] Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school.

No elemental mercury has been identified on school grounds and the school does not purchase or use in the school.

☒ [X] Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO).

Natural gas is the only fuel that is used.

☒ [X] Our school does not have any fuel burning combustion appliances.



[X] Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L OR our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L.

School was built with radon resistant construction features and tested to confirm levels below 4 pCi/L. Radon restrictive sensor installed to monitor levels through school wide computerized Honeywell monitoring system.

[X] Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure.

There are no playgrounds on site with railroad ties (chromate copper arsenate). No chromate copper arsenate present in any playground equipment.

3. Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure. (100 word max)

Only three chemicals are used in custodial services: Certified green glass and floor cleaners and the use of disinfectant (no disinfectants are certified).

4. Describe actions your school takes to prevent exposure to asthma triggers in and around the school. (100 word max)

Custodial staff is required to change HVAC air filters 3x per year, and the use of chemicals is strictly avoided, used only as necessary for proper cleaning and disinfecting of school grounds using certified green cleaners.

5. Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup mold or removes moldy materials when it is found. (100 word max)

School has a mandatory procedure in place: Within 24 hours of a leak, custodial staff is required to clean and disinfect spoiled area with approved certified green cleaning agents and/or disinfectant or bleach. Moldy materials are immediately removed, bagged and properly disposed of via municipal waste services.

6. Our school has installed local exhaust systems for major airborne contaminant sources. (X)Yes () No Please see description below.

7. Describe your school's practices for inspecting and maintaining the building's ventilation system and all unit ventilators to ensure they are clean and operating properly. (100 word max)

Commissioning for the optimization of HVAC and Lighting: Preventative maintenance schedule is in place to oil and grease exhaust fans and filters 3x per year. All custodial staff has attended comprehensive presentation of HVAC system protocol and received hands on training in commissioning update on operational procedures and maintenance of all equipment including boilers, ventilation, heating, and air conditioning units.



8. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards. (100 word max)

Automated units have been installed and are synchronized to occupancy schedule, turning on and off as indicated by computerized monitoring equipment.

9. Describe other steps your school takes to protect indoor environmental quality such as implementing EPA IAQ Tools for Schools and/or conducting other periodic, comprehensive inspections of the school facility to identify environmental health and safety issues and take corrective action. (100 word max)

Highly trained and skilled custodial staff maintains daily comprehensive computerized work schedule to monitor and maintain entire school. Custodial supervisor is always on site to monitor indoor environmental air quality via daily walks of entire building.

Nutrition and Fitness

10. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships. (100 word max each)

☒ Our school participates in the USDA's Healthier US School Challenge. Level and year:

Quincy Public Schools have been participating in the Healthier Us School Challenge for two years now, from the beginning of the school year in 2010 through to 2012.

☐ Our school participates in a Farm to School program to use local, fresh food.

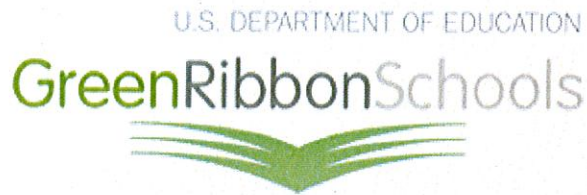
Quincy High School belongs to a purchasing cooperative called the Urban Ring to purchase produce for the school meals programs. Locally grown produce is available and ordered through the vendor selected via this bid. Future implementation of a Farm to School program is being discussed.

☒ Our school has an on-site food garden.

Quincy High School has a greenhouse as part of the STEM wing where students are actively involved in learning to grow their own food.

☒ Our school garden supplies food for our students in the cafeteria, a cooking or garden class or to the community.

At present, the greenhouse garden provides a great learning opportunity for students, but its limited size is insufficient to supply enough food for the entire student body. The culinary students train in a professional kitchen to prepare food, which can include student grown herbs, for the school's own restaurant. The Presidents' Café is run by students both front and back of the house and has been wildly successful since opening to the public. There has been discussion of expanding upon the



success of this program by implementing a schoolyard kitchen garden as a source of local, sustainable food.

☒ Our students spent at least 120 minutes per week over the past year in school supervised physical education.

The students take part in roughly 180 minutes of supervised Physical Education in one week but are only scheduled for one quarter or 10 weeks of Physical Education per school year.

☒ At least 50% of our students' annual physical education takes place outdoors.

With the benefit of our new track and the tennis courts fully functional 50% of our students' physical activity will take place outdoors during the Spring and Fall quarters.

☒ Health measures are integrated into assessments.

All of the Physical Education students take part in Fitness Testing.

☐ At least 50% of our students have participated in the EPA's Sunwise (or equivalent program). Not at this time.

☒ Food purchased by our school is certified as "environmentally preferable": Percentage: **40%** Type: Locally sourced produce.

11. Describe the type of outdoor education, exercise and recreation available. (100 word max)

Due to the recent construction of the new Faxon Field occupying available recreational space, the main outdoor recreation that has taken place has been tennis and walking. In the future we hope to add activities on the track and are looking for grants to get Snowshoes (hopefully we get snow!) If staffing and funding opportunities allow, we would love to add kayaking, hiking, and a complete outdoor education piece.

12. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships. (100 word max)

All students are eligible to receive a personal workout designed to focus on three goals they want to achieve. Beyond that we recently added what will hopefully be a great partnership with Quincy College to get their Exercise Science Students in for internship hours in areas such as Personal Training, Spinning, Zumba and the like. On a daily basis in Physical Education students can take part in Yoga, Cardio Dance, and weight training.



Pillar 3: Effective Environmental and Sustainability Education

1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships.

[X] Our school has an environmental or sustainability literacy requirement. (100 word max)

All students are responsible for completing the required Service to School and Community hours. This requirement instructs students on how volunteer work and personal responsible action can benefit the larger environment and impact the sustainable practices of other members within the community. Activities are completed at the student's school, another school, a nonprofit agency or local organization. Students may utilize their own special skills and talents by assisting with recreational programs, tutoring younger students, volunteering at senior housing, collecting and distributing food and supplies for a social services agency, improving the environment, or helping a community event. Fulfillment of the School and Community Service requirement is necessary to graduate.

[X] Environmental and sustainability concepts are integrated throughout the curriculum. (100 word max)

The entire curriculum utilizes interdisciplinary themes that speak to the broad scope of sustainability. Teachers work together to formulate and cross combine lessons with related concepts that show the interconnectedness between disciplines and systems. Students learn:

- Energy changes and conversions are found within all ecological processes and systems.
- The Earth is an interconnected system.
- Humans have an impact on these systems and can alter them positively and negatively.
- Environmental issues have a social context.
- Developing sustainable practices is essential to human success and survival.

[X] Environmental and sustainability concepts are integrated into assessments. (100 word max)

New school rubrics, individual student achievement (tests and projects), and school accreditation are all assessed to show gains in the long term. The school provides rigorous college preparatory programs as students learn through laboratory based curriculum and numerous interdisciplinary initiatives. Outfitted with the latest equipment and technology, our facility enhances real world environmental and sustainability concepts into student learning. Charting student success by areas of interest will serve as a means of assessing the short and long term goals.

[X] Students evidence high levels of proficiency in these assessments. (100 word max)

Our Science and Technology fair, with over 200 participants, builds the foundation for award winning projects at both the regional and state levels.



[X] Professional development in environmental and sustainability education is provided to all teachers.
(100 word max)

Our teachers are highly inventive, imaginative, talented, and capable leaders on the subject of sustainability. With a broad interest in the community and the working of the world at large, they passionately inspire the next generation of environmental stewards. Our state of the art facilities provide an innovative and effective teaching environment within which our teachers benefit from cross discipline learning arcs. The school's comprehensive outreach to the greater community allows their continued exploration of unique partnerships and professional collaborations which benefits the continued growth of sustainability education within the curriculum.

2. For schools serving grades 9-12, provide:

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career:

In 2012, 25 of our seniors took science AP exams for college credit.

Percentage scoring a 3 or higher:

Over 40 students actively participated in the science national honors society by earning exemplary science grades and maintaining a 3.75 GPA overall.

3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge? (100 word max)

STEM courses provide students with the scientific concepts, principles and methodologies to help understand the relationships of the natural world, analyze manmade and natural environmental problems and to examine alternative solutions for preventing and solving these problems. Field work and inquiry based hands on laboratories allow students to learn methods for analyzing environmental concepts and interpret mathematical calculations in a real world setting.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways? (100 word max)

The Quincy High School Science Department understands that many companies involved in solar, wind, biofuels, energy efficiency, green building, and other sustainable efforts are well positioned for growth. Students are now educated about innovations in clean technology that will change and create sectors and jobs we have yet to imagine. Local corporations and universities in collaboration with Quincy High School, help prepare students in diverse areas such as biotech engineering, environmental science, alternative energy, and green chemistry as we prepare students for success in the 21st Century.



5. Describe students' civic/community engagement projects integrating environment and sustainability topics. (100) word max

Cooking Thanksgiving dinner for Father Bills Place homeless shelter gave students an understanding of food security by providing healthy food for a population that lacks consistent access to balanced nutrition. Composted food waste is recycled in the on-site greenhouse powered with solar hot water. The school's QUEST team conducted a Shoreline Bubble Parade to address the impacts that climate change and sea level rise will have on our coastal community and will be working with the City to implement a school wide energy audit. Sustainable practices are carried out as part of the Service to School and Community.

6. Describe students' meaningful outdoor learning experiences at every grade level. (100 word max)

Summer Leadership Camp encompasses all grade levels by pairing integrated upper classmen with new incoming 9th grade students. The outdoor event begins with a picnic, followed by a trip to the Blue Hills Reservation for a challenging climb to the mountain top. The mission is to get every member to the top. At the summit a celebration activity takes place. The purpose of the climb is to build friendship through supportive camaraderie and provide an opportunity for leadership. The students develop a sense of participating as valued members of the high school community.

7. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills. (100 word max)

Quincy Public Schools is committed to the education of the whole student, encouraging their development into citizens who are invested and involved in their school and the greater community. Through hands on laboratories and science fair initiatives students are encouraged to study the local impacts of waste reduction, recycling, and energy conservation issues. Students host pledge drives in conjunction with local businesses to raise money for student council initiatives and scholarship funds.

8. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships. (Maximum 100 words)

The School has partnered with the City's Planning Dept. for USGBC's Green Apple Day, to implement the Eco-Schools USA Cool Schools Challenge Energy Audit as real world instruction on the importance of energy reduction. Moving forward, the school also hopes to partner with Boston Architectural College Landscape Architecture Candidates on the hot topic of sustainable urban agriculture. Because of the school's urban setting and interest in implementing the Farm to School program and schoolyard kitchen garden, Quincy High School is poised to become an excellent hands-on classroom on the cutting edge of trending sustainable urban agriculture projects.



9. Describe any other ways that your school integrates core environment, sustainability, STEM, green technology and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships. (Maximum 200 words)

The innovative building design promotes and supports an integrated approach to the curriculum, for example AP biology and environmental science students share labs and classes with students who may be tracking for the nursing or applied medical technical specialties. Top instruction, facilities and resources are available to all students on this equal basis, regardless of post-high school employment and educational choices. All freshmen take a Career Connections Class taught by interdisciplinary teams of academic and technical teachers. In addition to a core academic program, students may choose academic electives, as well as, Independent Study, Internships, Co-operative Education, and Community Service Learning. This progressive and flexible approach creates real world partnerships between students and the broader community which allows students to develop a love of learning by doing. It has been very effective and rewarding to develop the whole student by giving them the opportunity to pursue the appropriate direction that aligns with their own interests. This mutually beneficial practice between students and community has the added benefit of reducing the drop-out rate for previously at-risk student populations, resulting in their growth into productive, responsible citizens actively interested and involved in positively contributing to the world around them.

10. You may submit photos or video content to enhance your responses.

Students have put together a brief video proudly highlighting the school's greatest attributes for submission and consideration.